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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,968	05/16/2005	Rene Gounon	4590-399	9420

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EXAMINER

MULL, FRED H

ART UNIT PAPER NUMBER

3662

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/534,968

Applicant(s)

GOUNON, RENE

Examiner

Fred H. Mull

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10,11,13,14,16-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 2,9,12,15 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08/31/2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments have been fully considered and are persuasive.

Therefore, the objections and rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Drawings

2. The drawings are objected to as indicated in the Notice of Draftperson's Patent Drawing Review.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 1 is objected to because of the following informalities:

In line 16, "liner combinations equation" should be --linear combination equations--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. Regarding claims 4, 10, and 11, the term "preferably" renders the claims indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3-8, 11, 13-14, 16-18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Gounon (EP 0 886 148, where all references are to the English translation).

In regard to claims 1, 5-8, and 18, Gounon discloses:

periodically determining, for each of said frequencies, of a set of $2p$ pseudo-ranges, for p pseudo-ranges between the mobile and the p satellites and p pseudo-ranges between the reference station and the p satellites (p. 3, last ¶),

supplying of the pseudo-ranges to a position-calculating unit (p. 3, last ¶), and calculating by the position-calculating unit of a relative position of the mobile in relation to the reference station based on the pseudo-ranges and on an estimated position P_e of the mobile in relation to the reference station, this method being mainly characterized in that, for a given set of $4p$ pseudo-ranges received by the calculating unit, the calculation of the relative position, comprising the following steps:

a) choosing a linear combination equation aL_1+bL_2 of said frequencies L_1 and L_2 from a predetermined list having at least two linear combinations of frequencies (p. 4, 3rd ¶),

b) calculating the linear combinations of pseudo-ranges corresponding to the linear combination equation, and, on the basis of these linear combinations of pseudo-ranges and the estimated position P_e , calculating a precise relative position P_p of the mobile in relation to the reference station (p. 4, 3rd ¶),

c) choosing from the list the following linear combination, if it exists, and, in this case, reiterating step b), setting the estimated position P_e as equal to said precise position P_p , and using the same set of $4p$ pseudo-ranges to obtain an even more precise relative position, d) reiterating step c) for all the linear combination equations in the list (p. 4, 4th ¶, where the new estimated position is (X_{L4}, Y_{L4}, Z_{L4}) , which is based on the calculation of L_4 in the previous step, and

here the list only has two entries, the calculation of L4 and L5 in the first, and the calculation based on L4 and L5 in the second).

In regard to claims 3, 11, 13, 16, and 20, Gounon further discloses the first combination equation in the list is the combination equation $L1-L2$ ($a=1$, $b=-1$), L1 and L2 being the transmission frequencies of the satellites of the GPS system (p. 3, 4th ¶).

In regard to claims 4, 14, and 17, Gounon further discloses the intermediate combination equations include $4L2-3L1$ ($a=4$, $b=-3$) (p. 4, 3rd ¶)

Allowable Subject Matter

6. Claim(s) 2, 9, 12, 15, and 19 is/are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claim(s) 10 would be allowable if amended to overcome the rejection(s) under 35 U.S.C. 112, set forth in this Office action, and if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred H. Mull whose telephone number is 571-272-6975. The examiner can normally be reached on Monday through Friday from approximately 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza can be reached on 571-272-6979. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Fred H. Mull
Examiner
Art Unit 3662

fhm



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